

Cisco C1-N7718

Datasheet

Product Overview

- The Cisco Nexus 7000 Series defines Cisco's commitment to unified data center networking with high-end modular switches.
- Designed for large-scale enterprises and cloud providers, it fits mission-critical data center environments needing maximum uptime.
- Industry-leading scalability and consistent software enable seamless network integration, even as demands grow.
- NX-OS ensures operational reliability, advanced virtualization, and robust automation across all Nexus 7700 Series platforms.

Product Highlights

- **Massive Port Density:** Supports up to 768 native 10G, 384 40G, or 192 100G Ethernet ports per chassis, meeting dense connectivity needs.
- **Exceptional Switching Capacity:** Delivers over 83 Tbps system-level switching, ideal for cloud-scale deployments and high-traffic data centers.
- **Unified NX-OS Software:** Ensures operational consistency and advanced network feature set across all Nexus 7700 and 7000 series switches.
- **High Availability Design:** Redundant supervisors, fabric modules, and power supplies support nonstop operation and enhanced reliability.

Detailed Features



C1-N7718

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Component	Specification
Slot Configuration	18 slots: 2 supervisor, 16 I/O



Flexible Chassis Designs

Cisco Nexus 7000 Series offers four chassis sizes: 18-slot, 10-slot, 9-slot, and compact 4-slot options, each with integrated cable management and optimized airflow, addressing diverse data center topologies and rack space limitations.

Midplane and Crossbar Fabric

All chassis utilize a passive mid-plane to interconnect fabric and I/O modules, ensuring direct data transfer between slots. The crossbar ASICs on I/O and fabric modules deliver high-speed, low-latency switching, optimizing internal communication.

Scalable Distributed Fabric Architecture

Up to five fabric modules and a robust midplane provide up to 550Gbps per slot, supporting total forwarding capacity of 8.8Tbps, 9.9Tbps, or 18.7Tbps on the 9, 10, and 18-slot models. The 4-slot chassis delivers up to 1.92Tbps, scaling for the largest enterprise needs.

Investment Protection

The midplane and backplane construction allow seamless feature and technology upgrades, protecting current investments and ensuring long-term adaptability as network demands evolve and expand.

Energy-Efficient Power Supplies

Nexus 7000 Series power supplies operate at up to 90% efficiency, significantly reducing thermal output and operating costs while maximizing usable power for network operation and expansion.

Dynamic Fan Module Management

Fan modules automatically adjust power and speed based on thermal demands. Unused slot zones can completely power down their fan trays, lowering energy use and minimizing noise in operational environments.

Integrated Device Virtualization and Reliability

High port density, robust performance, and advanced virtualization allow consolidation of multiple switches into one, reducing network complexity, boosting reliability, and maximizing resource efficiency.

High Power Efficiency and Consolidation

Combining multiple capabilities reduces the need for several underutilized systems, improving overall power efficiency, cooling requirements, and operational simplicity in modern data centers.

Technical Specifications

Product Specifications

Feature	Value
Chassis Type	18-slot modular switch
Supervisor Modules	2 × SUP (Active/Standby)
Fabric Modules	6 × Fabric-2 modules
Power Supplies	Supports 3.5 kW HV AC/DC (not included)
Rack Units	26RU
10G Ports	768
40G Ports	384
100G Ports	192
System Forwarding Capacity	83 Tbps
Max Local Switching Capacity	1.2 Tbps
Max Inter-Slot Switching Capacity	1.2 Tbps
Dimensions (H × W × D)	45.25 × 17.3 × 35 in (114.9 × 43.9 × 88.9 cm)
Chassis Depth (with Cable Management)	41 in (104.1 cm)



Feature	Value
Operating Temperature	0 to 40°C (32 to 104°F)
Humidity	5% to 90% noncondensing
Altitude	-500 to 13,123 ft (certified 0–6,500 ft)
Heat Dissipation	Max 96,160 BTU/hr (configuration-dependent)
Seismic Rating	Zone 4 per GR-63
Floor Loading	230 lbs/sq. ft.
Minimum NX-OS Version	6.2.2 or later
Network Management	Cisco DCNM
Programming Interfaces	XML, Python, OpenFlow, Cisco OnePK, TCL
Hot-Swap Components	Power supplies, fabric modules, fan trays, supervisor engines
MIB Support	SNMPv3, v2c, v1
EMC	FCC Part 15 Class A, EN55022 Class A, VCCI Class A
Safety	UL/CSA/IEC/EN 60950-1
NEBS	SR-3580 Level 3 (validation in progress)
Options	Door air filter, lockable front module doors, power supply center cable management

Product Comparison

Feature	C1-N7718	C1-N5K-C5596UP-FA	C1-N9K-C93180LCB2
Chassis Type	18-slot modular switch	2RU fixed	1RU fixed
10G Ports	768	48	32
40G Ports	384	0	6
100G Ports	192	0	32
System Switching Capacity	83 Tbps	960 Gbps	3.6 Tbps
Max Power Supplies	16	2	2
Hot-Swap Components	Yes	Yes	Yes
Network OS	Cisco NX-OS	Cisco NX-OS	Cisco NX-OS



Feature	C1-N7718	C1-N5K-C5596UP-FA	C1-N9K-C93180LCB2
Management Options	Cisco DCNM, XML, Python, OpenFlow, CLI	Cisco DCNM, CLI	Cisco DCNM, CLI
Physical Size (RU)	26RU	2RU	1RU
Best Use Case	Large Data Center/Core	Data Center Aggregation	Leaf/Spine Data Center Switch

Accessories

Category	Accessories
Included Accessories	- Chassis Mounting Hardware - Cable Management Arm - Console Cable
Optional Accessories	- Additional Supervisor Module - Advanced Fabric Module - Enhanced Power Supply Module



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References

[1] Cisco. (2023). Cisco Nexus 7000 Series Switches Data Sheet. Retrieved from https://www.cisco.com/c/en/us/products/collateral/switches/nexus-7000-series-switches/data_sheet_c78-728187.html